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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/356,845 07/19/99 KAEWELL JR.

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EXAMINER

BOCURE, T

ART UNIT	PAPER NUMBER
2731	9

DATE MAILED:

07/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/356,845	Applicant(s) John David Kaewell et al.
	Examiner Tesfaldet Bocure	Group Art Unit 2731

Responsive to communication(s) filed on _____

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

Claim(s) 11 and 13-31 is/are pending in the application.
 Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 11 and 13-31 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been
 received.
 received in Application No. (Series Code/Serial Number) _____
 received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892
 Information Disclosure Statement(s), PTO-1449, Paper No(s). 8
 Interview Summary, PTO-413
 Notice of Draftsperson's Patent Drawing Review, PTO-948
 Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed May 15, 2000 (paper #8) on has/have been received and the initialed copy/copies (3 copies) of the 1449 is/are attached with this correspondence.

As to the IDS filed on October 07, 1999 (paper #4), it is the same as the once of May 15, 2000, therefore has not been singed.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

(a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

© In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be

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necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because it fails to provide an adequate written description of the invention.

The specification as originally filed does not provide a support to the *newly claimed* “primary station is transparent to the base station and secondary station” in claims 24, 28 and 31, and “the primary station cleans the RX information prior to TX information” in claims 25 and 29.

Examiner has exhausted to specification to find a fair interpretation to the above mentioned claimed subject in the specification..

Claims 24,25,28,29 and 31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed “primary station is transparent to the base station and secondary station” in claims 24, 28 and 31, and “the primary station cleans the RX information prior to TX information” in claims 25 and 29 are not disclosed in the specification.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11,16,17 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being

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indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11: "Said radio transceiver" in line 10 lacks a clear antecedent basis. Is it the same radio having a receiver and transmitter recited in line 6? *OK*

"A secondary station" recited in lines 4-5 should be written as " said secondary station."

See line 21 for " a secondary station." *OK*

Claim 16: "The m duplex telephonic communication" in line 9 lacks a clear antecedent *OK* basis.

Claim 17: "The second station" in lines 1-2 lacks a clear antecedent basis. Is it the same as the "**secondary** station" claimed in claim 15? *OK*

Claim 19: the claimed limitation "transmits a signal carrying TX information transmitted from the base station---," in clause is not understood. First, there is not TX information transmitted from the base station claimed before. Second it is not clear from the claim what is transmitted by the telecommunication station.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11,13-23,26,27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sperlich** (US patent # 4,644,534) in view of **Christian et al.** (US patent number 4,549,293, newly cited).

Sperlich teaches a communication system comprising: a primary station (1 fig. 1) communicating with a plurality of secondary stations (U1-U4), wherein the primary station assigning a time slot in a given frequency for each of the receiving unit (One station figure 5, see also col.1, lines 23-28 and time slot in figure 3), the receiving unit detecting the corresponding time slot and communicates back to the central station on the given frequency and slot (figs 3 and 5, col. 2, lines 41-68 through cols 3-5 and claim 1), as claimed in claims 11,12,15,16 and 19.

In the system of **Sperlich**, the central station communicates with the plurality of base stations on duplex-time division multiplexing, therefore, it reads on the claimed duplex telephonic

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communication (see col. 1, lines 23-28 and) claimed in claim 13 .

The transceiver units in the system of **Sperlich** are a radio communication system, therefore reads on the claimed subject matter in claims 18 and 21.

With respect to claims 22, 26 and 30, the slave stations (U1-U4) are communicating with the master station (Z).

With respect to claims 23,27 and 30, the assigned time slot (S1, B4, S2, B3---in figure 3) for a selected frequency have the same time duration, therefore reads on the claimed same slots frame and time sync.

What **Sperlich** fails is the base station (shown and disclosed as repeater station) for receiving the TX speech signal and transmitting the secondary station as in claims 11, 15 and 19, and the secondary station located outside the operating range of the base station as in claims 14,17 and 20.

Christian et al. for the same endeavor as the instant invention and that of **Sperlich** teaches a master station communicating with a of repeater (10'n fig. 3) (claimed base station or master station) and plurality of slave stations (claimed secondary stations), wherein the master station transmits a time division frames having a plurality of slots for the sync and the TX information to the slave unit (1-5) located far outside the operating range of the master station (12) via the repeater as in claims 11,14,15,17,19 and 20.

The repeater station of **Christian** will enable the system of **Sperlich** to retransmit the data to and from the master station and the slave units.

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Therefore, it would have been obvious one of an ordinary skill in the art to us the repeater

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of **Christian** in the system **Sperlich** at the time the invention was made.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11,13-23,26,27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Leeuwen** (US Patent number 4,031,330, of a record) in view of **Christian et al.** (US patent number 4,549,293, newly cited).

Van Leeuwen teaches a transmission system (fig.1) having a base unit (1 fig.1 and fig.3) for transmitting and receiving to and from a plurality of subscriber station (see slave stations 2-6 in fig. 1), where the base station comprising a control unit (13) for controlling the frequency and time allocation of the signal to be transmitted to the plurality of slave units (see cols 3 to 4) as in claims 11,15 and 19.

Further to claims 12-.19, the base station transmits a plurality of signals to the base stations in a selected frequency and time slots, and the slave units transmit a corresponding signal on a given time slot and frequency (see fig. 2). Wherein a sync code is transmitted in a given slot as in claims 12,16 and 19.

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The transmission system of **Van Leeuwen** further transmits and receives a duplex traffic using a time division, wherein each of the time slot for receive and transmit to and from the plurality of slave units having a corresponding transmit time slots and receive time slots (see A1,A2,B1 and B2 time slots in figures 2 and col.3) as in claim 13.

The transceiver units in the system of **Van Leeuwen** are a radio communication system, therefore reads on the claimed subject matter in claims 18 and 21.

Even though **Van Leeuwen** does not show that n slots used for each, the transmitting and receiving as in claim 15, it is obvious to assign more than one time slot for transmitting and receiving depending on the need, i.e, depending on the number of subscriber station communicating with the master station.

With respect to claims 22, 26 and 30, the slave stations (1-5) are communicating with the master station (10_0).

With respect to claims 23,27 and 30, the assigned time slot (figures 6A-6E) for a selected frequency have the same time duration, therefore reads on the claimed same slots frame and time sync.

What **Van Leeuwen** fails to teach is the base station (shown and disclosed as repeater station) for receiving the TX speech signal and transmitting the secondary station as in claims 11, 15 and 19, and the secondary station located outside the operating range of the base station as in claims 14,17 and 20.

Christian et al. for the same endeavor as the instant invention and that of **Van Leeuwen**

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teaches a master station communicating with a plurality of repeater (10'n) (claimed base station or master station) and plurality of slave stations (claimed secondary stations), wherein the master station transmits a time division frames having a plurality of slots for the sync and the TX information to the slave unit (1-5) located far outside the operating range of the master station (10₀) via the repeater as in claims 11,14,15,17,19 and 20.

The repeater station of **Christian** will enable the system of **Van Leeuwen** to retransmit the data to and from the master station and the slave units.

Therefore, it would have been obvious one of an ordinary skill in the art to us the repeater of **Christian** in the system **Van Leeuwen** at the time the invention was made.

Response to Amendment

5. Applicant's argument that the prior art of record do not show the telecommunication station for transferring the data between the base station and secondary station is moot because of the new art (see claims rejected by the newly used reference to Christian et al.),

6. In response applicant's argument that:

Sperlich discloses a base station which transfers data to a group of substation using time slots. Sperlich does not disclose that any other substations directly communicate with any station other than the base station. Van Leeuwen

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only shows---.

No where in the claims is calling for the secondary stations communicating with each other, therefore the argument is moot.

As to the applicant's argument with respect to the assignment of time slot where:

the assignment of time slots of $2n$ fixed periodic time slot not shown in the Van Leeuwen, the claimed subject matter in claim 15 (not in claims 11 and 19 as argued) calls for "transmit synchronization information including the assignment of $2n$ fixed periodic time slots, where n is an integer greater than 1, on a selected frequency, *n fixed periodic slots for transmission and n fixed periodic reception time slots*--.

Examiner admits that Van Leeuwen shows that there are only two time slots, each for transmitting and receive (including the sync time slots A1 and A2), however it is obvious to assign more than one time slot for transmitting and receiving depending on the need, i.e, depending on the number of subscriber station communicating with the master station..

As to the argument with respect to claims 24,28 and 31, the specification as originally filed does not provide a support to the claimed limitation, therefore no response is appropriate at this time.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent numbers 3,593,138 and 4,577,315 issued to Dunn and Otsuka respectively disclose a TDM transmission system having a repeater for retransmitting TX signals to and from the master and slave units.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T.Bocure whose telephone number is (703) 305-4735. The examiner can normally be reached on Monday through Thursday the first week of a bi-week and Monday through Friday the second week of a bi-week from 7:00am to 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305- 4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4743 or (703) 305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

T.Bocure

July 20, 2000

*Tesfaldet Bocure
Primary Examiner
Art Unit 2731*